interaction increases with altitude. This study, therefore, is the first to test (and to provide support for) the SGH in the sub-Antarctic, and highlights the broad applicability of the SGH for predicting spatial variation in plant interactions at high latitudes and altitudes.

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Improved flowering of a South African *Watsonia* with smoke treatments

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Although smoke treatments have successfully been used for promoting germination of many species, the effect of smoke in promoting flowering has not been widely investigated. Greenhouse experiments were conducted to evaluate the effect of different smoke treatments on the flowering of a spring-flowering hybrid of *Watsonia borbonica*. Corms of Watsonia 'Shrimp Pink' were treated with aerosol smoke or smoke water prior to planting in autumn (ten plants per treatment). For the aerosol smoke treatment, corms were placed in a sieve and exposed to cooled smoke for 30 min. For the drench treatments, 100 mL of smoke solution (1:500 or 1:2000 dilution) were applied to the plants weekly. A once-off drench treatment of a 1:500 smoke solution was also carried out. Only two of the control plants produced flowering spikes, whereas up to nine out of ten plants treated with a drench of 1:500 dilution of smoke water flowered. The development of a flowering spike did not appear to correlate with original corm size. Additionally, although not statistically significant, the average increase in corm weight was greater in smoke-treated plants than the control. Thus, smoke treatments may potentially be used to promote flowering in some geophytes.

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The pathway of starch degradation in potato leaves

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Starch degradation in leaves is a process that is still not well understood. Using a reverse genetics approach we have identified enzymes that are involved in this process. One of these is a protein which has a completely novel activity in that it phosphorylates starch using ATP, but utilizes a dikinase mechanism, transferring the β-phosphate to starch while releasing the γ-phosphate into solution. Plants lacking this protein contain starch with reduced levels of covalently bound phosphate and are unable to degrade transitory starch during the dark period. In addition we have identified a plastically localize β-amylase isoform which, when repressed using an antisense construct, also leads to the production of plants that are unable to degrade leaf starch to the same extent as controls. β-amylase manufactures maltose as a product of starch degradation and we have also identified a transglucosidase enzyme which is responsible for maltose catabolism. Plants lacking this enzyme accumulate maltose, and also are repressed in starch degradation.

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The effect of some of the indigenous medicinal plants in treatment of tick infected cattle-wounds in the Vhembe district of Limpopo Province, RSA

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Poor animal health is an important factor limiting animal productivity in most developing countries. Traditional medicine is important in developing countries that lack access to conventional medicines for animal health care. It has also been found to be accessible and affordable to poor rural farmers. Anti-repellent activities on indigenous medicinal plants that are used in treatment of wounds caused by ticks are being investigated. Instead of waiting for the wounds to be caused by ticks it can be productive to stop the ticks from attacking the animals.

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New generic circumscriptions of Cape peucedanoid species (Apiaceae)

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The genus *Peucedanum* L. as traditionally circumscribed is a group of ca. 120 species found in Africa, Europe and Asia. It is generally accepted that *Peucedanum sensu lato* is